REMARKS

Introduction

As an initial matter, applicants wish to thank Examiner Li and her supervisor, Debbie Reynolds for the courtesies extended by them during a May 4, 2004 interview. The present response addresses the issues discussed in that interview.

Receipt is acknowledged of a final office action dated January 28, 2004. In the action the Examiner rejected claims 32, 35, 36, 41 and 44 as allegedly indefinite and not enabled. In addition, the examiner rejected claims 32, 35, 36, 41 and 44 as allegedly obviousness. Applicants respectfully traverse these rejections.

Status of the Claims

In this response applicants amended claims 32 and 44. Support for the revised claims can be found throughout the specification. Upon entry of this amendment, claims 32, 35, 36, 41 and 44 will be under examination.

35 USC § 112, first paragraph

In the action, the examiner rejected claims 32, 35, 36, 41 and 44 allegedly for nonenablement. Specifically, the examiner indicated that "the experimental data confirm the preservation of tumor antigen diversity, but not other diversity" (office action at 3). Thus, in the interest of expediting prosecution, applicants amended claims 32 and 44 to recite the preservation of tumor antigen diversity. Applicants submit that this amendment addresses the examiner's concerns regarding the word "diversity" and request withdrawal of the rejection.

35 USC § 112, second paragraph

Furthermore, the examiner rejected claims 32, 35, 36, 41 and 44 allegedly for indefiniteness, asserting that "the claims have not been made clear [as to] what type o of diversity they refer to" (office action at 4). As discussed above, the presently claimed invention recites "tumor antigen diversity," thereby rendering the instant rejection moot.

35 USC § 103

Continuing, the examiner rejected all pending claims as allegedly obvious over Gong, in view of Koolwijk. In particular, the examiner stated "the motivation to combine the references is not relied on preserving diversity but the efficacy of the process" (office action at 7). In other words, the examiner cites Koolwijk and asserts that "saving time and cost has always been the motivation for improvement in the advance of all fields of technology" (office action at 7).

However, the method described in Koolwijk comprises using a Percoll density gradient centrifugation, followed by fluorescence-activated cell sorting. Not only does Koolwijk describe a selection process for hybrid-hybridomas, *i.e.*, cells that are not dendritic cell fusions, but the method is more time consuming than the single-step method of HAT selection as described in Gong. Also, Koolwijk describes the Percoll gradient step as critical to achieving high yields ("by using Percoll density gradient centrifugation before sorting, the overall increase of producing hybrid hybridomas was approximately 8 fold" (Koolwijk at 223)). Thus, a skilled artisan would not take the teachings of Gong and look to a two-step Koolwijk approach for a faster and cheaper method of selection.

Moreover, the Koolwijk method describes a fast isolation advantage "over the method [of hybrid hybridoma isolation] using mutant phenotypes and biochemical selection after fusion" (Koolwijk at 224). Applicants respectfully assert that the examiner has taken this quotation out of context. The advantage to which the reference is referring relates to sorting hybrid hybridomas. Thus, while the Koolwijk method may be faster than other hybrid hybridoma sorting procedures, it is not faster than common, well described methods of fusion cell sorting by metabolic selection. Koolwijk even recognizes that the time-consuming step is in the "isolation of mutant phenotypes," which is not even applicable to Gong (*id.*).

Furthermore, at the time of filing, dendritic cell and other cell fusions were usually selected by metabolic selection and not FACS. Therefore, one of skill in the art would not look to substitute a more "experimental" approach for cell fusion selection when other more

common prior art methods such as antibody and metabolic selection that do not appear to pose any difficulties were available.

Lastly, Gong describes success in treating cancer with dendritic cell fusions and therefore, one of skill in the art would not look to Koolwijk or another reference to improve upon the method in Gong. Indeed, the teachings in Gong would not indicate that another method for selecting cells would be more effective in identifying cell fusions suitable for cancer treatment. In fact, a skilled artisan would not be motivated to modify Gong since Gong described how well his cell fusions worked. But Gong and others failed to recognize the significance of preserving antigen diversity in the dendritic cell fusions. As previously argued, while a skilled artisan knows that culturing cells over a period of time results in loss of tumor antigen diversity, the significance of this effect was not appreciated at the time of filing the present application. Thus, one would not be motivated to change the method of Gong to avoid culturing cells because the import of not culturing cells was not recognized prior to the present invention.

In view of the foregoing arguments, it is respectfully requested that the present rejections be withdrawn.

CONCLUSION

Applicants respectfully request entry of the present amendment as it does not raise any new issues and if fact, reduces issues for appeal. Additionally, reconsideration of the present application in view of the foregoing amendments and arguments is kindly requested.

It is respectfully urged that the present application is now in condition for allowance. Early notice to that effect is earnestly solicited.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application

Respectfully submitted,

Date May 19, 2004

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